Consideration of Potential Priority Chemicals

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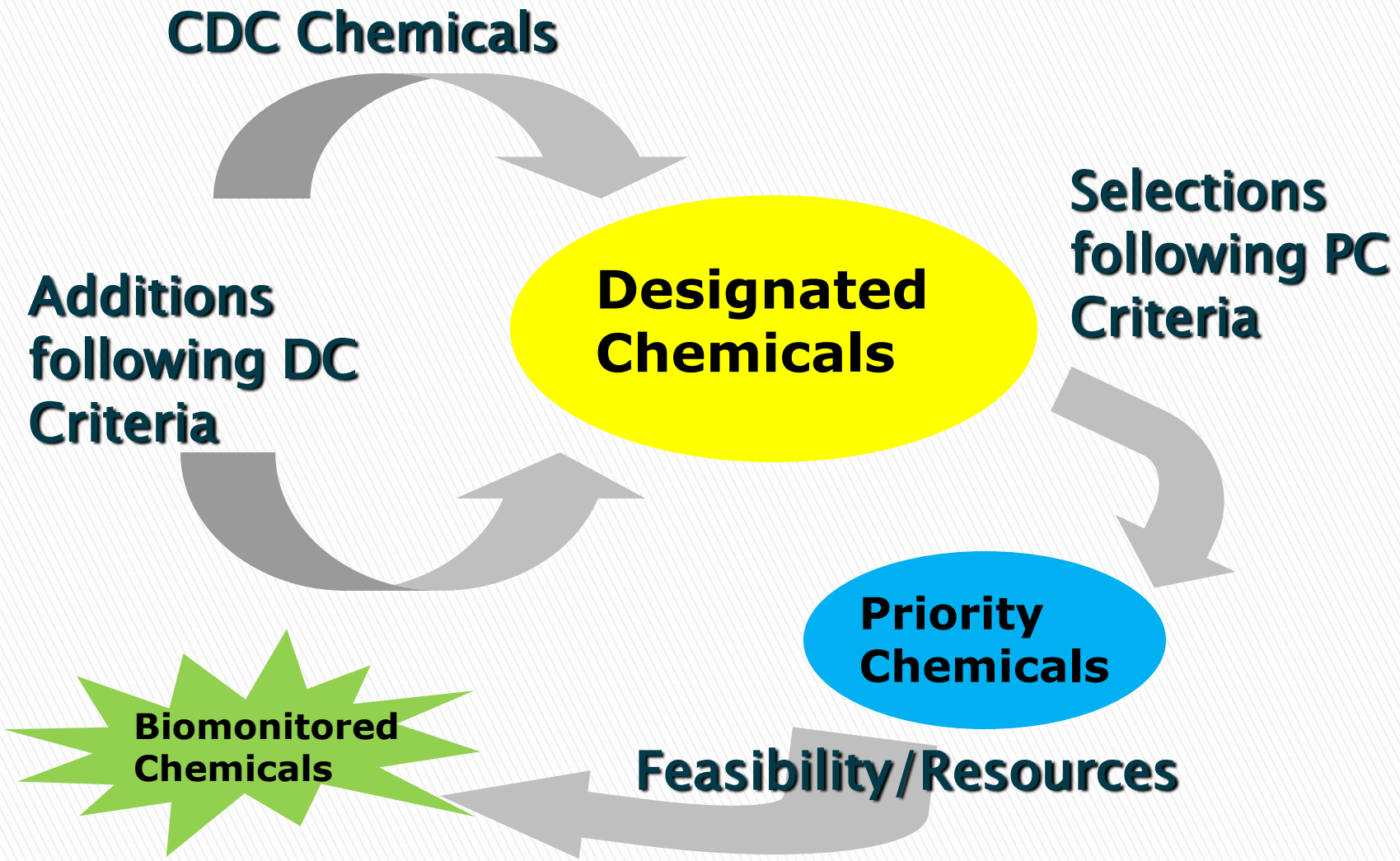
Outcome of December 2008 SGP meeting

- SGP to discuss and recommend priority chemicals at next meeting
  - Include discussion of criteria considerations
- CECBP staff to develop information on small set of potential priority chemicals
  - Chemicals identified by SGP
  - Secondary sources for background information
  - State laboratory capacity

Overview of materials for priority chemical discussion

- Table on chemicals of interest to SGP
- Background information
  - CDC materials
  - CECBP designated chemical documents
- State staff and public participation reports
- Table on state laboratory capacity for additional chemicals

Materials available on web and/or as handouts



DC = Designated Chemicals

PC = Priority Chemicals

Criteria for recommending priority chemicals (SB 1379)

- The degree of potential ***exposure*** to the public or specific subgroups
- The ***likelihood of a chemical being a carcinogen or toxicant*** based on peer-reviewed health data, the chemical structure, or the toxicology of chemically related compounds.
- The ***limits of laboratory detection*** for the chemical, including the ability to detect the chemical at low enough levels that could be expected in the general population.
- ***Other criteria*** that the panel may agree to.

Criteria Considerations from December 2008 SGP discussion

- Chemical use or exposure that is of special interest to California
- Test for tomorrow's chemicals, not yesterday's chemicals
- Laboratory considerations
  - State laboratory capacity in the near-term
  - Feasibility or availability of lab methods

Update on AB 289

- AB 289 specifies that the state may request information from manufacturers on:
  - Analytical test methods for a chemical in a specified matrix
  - Specific parameters (octanol–water partition coefficient, bioconcentration factor)
  - Other fate and transport information
- Prior to requesting information the state must:
  - Post web announcement specifying type of information and reason for seeking it
  - Conduct search for information from all known public sources
  - Make reasonable attempts to contact all manufacturers of the chemical to:
    - obtain already available information and
    - consult on additional information needed and technical feasibility of providing that information

Update on AB 289 (cont.)

- Practical experience of one agency using the law:
  - Process has taken one year so far
  - Several public workshops have been conducted
  - Information is slowly being provided

- Conclusion
  - Law is applicable to biomonitoring program
  - Carrying out requirements of law to obtain information will be time consuming and resource intensive

Chemicals of interest identified at December 2008 SGP

- Metals
- Pesticides
- Environmental phenols
- Perchlorate
- Perfluorinated compounds
- Phthalates
- Flame retardants
- Diesel exhaust

Excerpt of information on potential priority chemicals

Parent Chemical	Lab undertaking analysis	Biospecimen	Timeline for lab capability	Found in humans	Handout
Cadmium	CDPH	Whole blood	Now	NHANES	CDC
Lead	CDPH	Whole blood	Now	NHANES	CDC
Mercury	CDPH	Whole blood	Now	NHANES	CDC
Arsenic (speciated)	CDPH	Urine	Soon	NHANES	CDC
Metal panel (multiple metals possible)	CDPH	Urine	Not yet developed	NHANES	CDC

Excerpt of information on potential priority chemicals

Brominated and chlorinated organic chemical compounds used as flame retardants	Lab undertaking analysis	Biospecimen	Timeline for lab capability	Found in humans	Notes	Handout
Bis(2-ethyl-1-hexyl) tetrabromophthalate (TBPH)	DTSC	Serum	Soon	Not yet known	Low recovery	CECBP Document
Decabromodiphenyl-ethane (DBDPE)	DTSC	Serum	Soon	Not yet known		CECBP Document
1,2-Dibromo-4-(1,2-dibromoethyl) cyclohexane (TBECH)	DTSC	Serum	Soon	Not yet known		CECBP Document
2-Ethyl-1-hexyl-2,3,4,5-tetrabromobenzoate (TBB)	DTSC	Serum	Soon	Not yet known		CECBP Document

CDPH chemical panels I

Panel 1	Panel 2	Panel 3	Panel 4	Panel 5	Panel 6
Cadmium	Mercury (speciated)	Arsenic (speciated)	Metal panel (multiple metals possible)	Phthalates	Perchlorate
Lead					
Mercury					

CDPH chemical panels II

Panel 7	Panel 8	Panel 9	Panel 10	Panel 11
Organophos-phate pesticides (DAP metabolites)	Organophos-phate pesticide (diazinon specific metabolite)	Environmental phenols (Triclosan, BPA, Benzophenone-3, methyl paraben*, butyl paraben*)	Polycyclic aromatic hydrocarbons (PAHs)	Pyrethroids
	DEET			Organophos-phate pesticide (chlorpyrifos specific metabolite)

* = not designated chemicals

DTSC chemical panels

Panel 1	Panel 2	Panel 3	Panel 4	Panel 5
PBDEs (BDE 17, 28, 47, 66, 85, 99, 100, 153, 154, 183, 209)	PBDE (BDE 209)	Flame retardant (TBPH)	Flame retardant/ Environmental phenol (TBBPA)	Perfluorinated compounds
Flame retardants (BTBPE, TBECH, TBB, HBCD, PBEB, DPTE, HBB, PBT)	Flame retardant (DBDPE)		Hydroxylated PCB metabolites	
Organochlorine pesticide metabolites (for: Chlordane, DDT, Hexachlorobenze)			Hydroxylated PBDE metabolites	
PCBs (PCB 66, 74, 99, 118, 138, 153, 170, 180, 187, 194, 203)			Environmental phenols (Pentachlorophenol, Pentabromophenol, Triclosan)	